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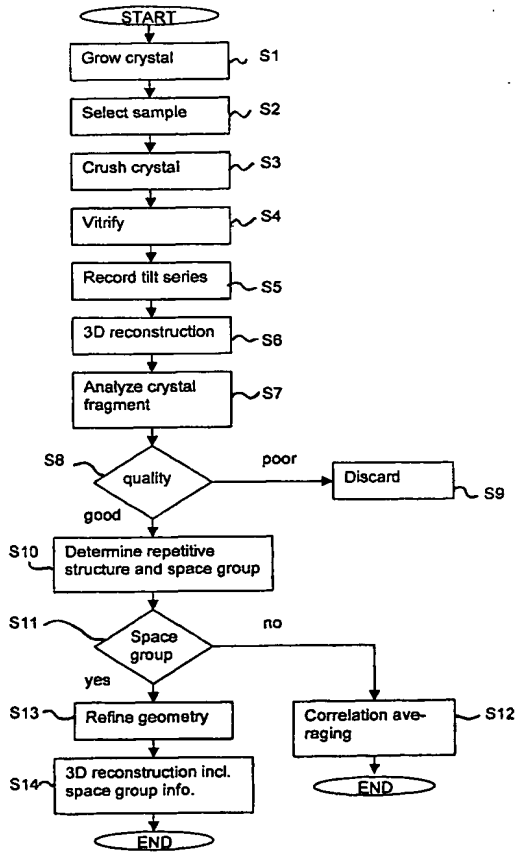
(54) Title: METHOD FOR HIGH-RESOLUTION 3D RECONSTRUCTION




(57) Abstract: Abstract A method for achieving a high-resolution 3D reconstruction of a crystal, comprising the step of growing a crystal in a way known in the art characterized by the steps of Crushing the crystal into microcrystals, vitrifying a sample of the microcrystals for cryoTEM, recording a tilt series, and obtaining a first 3D reconstruction using the FB+COMET procedure. If the sample is of high quality, the repetitive structure and, if possible, the space group of the crystal are determined. If the space group could be determined, a second 3D reconstruction may be obtained including information about the space group. The method according to the iAbstract A method for achieving a high-resolution 3D reconstruction of a crystal, comprising the step of growing a crystal in a way known in the art characterized by the steps of Crushing the crystal into microcrystals, vitrifying a sample of the microcrystals for cryoTEM, recording a tilt series, and obtaining a first 3D reconstruction using the FB+COMET procedure. If the sample is of high quality, the repetitive structure and, if possible, the space group of the crystal are determined. If the space group could be determined, a second 3D reconstruction may be obtained including information about the space group. The method according to the invention enables the use of microcrystals for achieving 3D reconstructions with a very high resolution, in the order of magnitude of 10Å.

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